What is claimed is:

1. A magnetic pickup for a stringed musical instrument, comprising:

magnet means for supplying a magnetic field which envelopes strings of a musical instrument;

an upper coil means for sensing fluctuations in a magnetic field caused primarily by said magnet means and generating an electrical string signal therefrom;

a lower coil means for sensing fluctuations in a primarily ambient magnetic field caused by unwanted noise and for generating an electrical noise signal therefrom;

connection means for coupling said lower coil means and said upper coil means together so said string signal and said noise signal are summed but are 180 degrees out of phase;

flux transfer means for diverting said magnetic flux lines in an ambient magnetic field not caused by said magnet means away from said said upper coil means and into said lower coil means so as to cause electrical signals representing noise to be mostly in said electrical noise signal generated by said lower coil means, and for helping concentrate magnetic flux lines from said magnetic field caused by said magnet means so as to cause most of a conversion of magnetic field flux line fluctuation caused by vibration of said strings to electrical signal to occur in said upper coil means.

2. The apparatus of claim 1 futher comprising a trim pot adjustable resistor means coupled to said lower coil means for allowing adjustment of the amount of cancellation of noise signal in said electrical string signal via summation with an adjustable amount of said electrical noise signal.

3. A magnetic pickup for a stringed musical instrument having a plurality of strings, comprising:

an upper coil form having an upper coil winding wrapped around said upper coil form to form an upper coil, said upper coil preferably having the same geometry as prior art single coil magnetic pickups;

one or more magnets in the center of said upper coil form;

a lower coil form having a lower coil winding wrapped around said lower coil form;

flux transfer plate means for concentrating in the vicinity of said upper coil the magnetic flux generated by said one or more magnets in the center of said upper coil form, and fluctuating in accordance with vibrations of magnetically permeable strings of a stringed instrument, and for diverting ambient magnetic flux lines which are fluctuating in accordance with unwanted noise away from said upper coil and into said lower coil;

connection means for coupling said upper coil to said lower coil such that an output signal is generated which is the difference between an electrical signal generated in said upper coil and a signal generated in said lower coil.

4. The apparatus of claim 3 further comprising adjustable resistor means coupled to said lower coil, for adjusting the amount of noise signal generated by said lower coil that is applied to cancel unwanted noise in a signal generated in said upper coil.

5. The apparatus of claim 3 wherein said one or more magnets comprises a plurality of alnico rod magnets.

6. The apparatus of claim 3 wherein said one or more magnets comprise a plurality of rare earth magnets.

7. The apparatus of claim 6 wherein each of said rare earth magnets has a ferrous cap.

8. The apparatus of claim 3 wherein said one or more magnets is a ceramic bar magnet.

9. The apparatus of claim 8 further comprising a plurality of ferrous caps placed between a top of said bar magnet and said strings.

10. The apparatus of claim 3 wherein said flux transfer plate means is comprised of first and second ferrous plates formed so as to have vertical walls which shield the sides of

said upper coil winding, and horizontal walls magnetically coupled to said vertical walls which shield said upper coil winding from said said lower coil winding, and a second set of vertical walls magnetically coupled to said horizontal walls which guide magnetic flux into a core of said lower coil winding, and wherein vertical means orthogonal to a plane defined by said strings and horizontal means parallel to a plane defined by said strings.

11. The apparatus of claim 3 wherein said lower coil form and said flux transfer plate means are a single structure molded or fabricated using ferrous material.

12. The apparatus of claim 11 wherein said ferrous material is ferrite.

13. The apparatus of claim 11 wherein said ferrous material is powered metal.

14. The apparatus of claim 11 wherein said ferrous material is ferrous flakes encapsulated in a plastic matrix.

15. The apparatus of claim 11 wherein said ferrous material is any ferrous material which has been laminated.

16. A magnetic pickup for a stringed musical instrument, comprising:

an upper coil form comprised of first and second plates formed of non ferrous material, each having a plurality of holes therein in which rod magnets may be inserted, said holes aligned so as to hold said rod magnets in parallel relationship when said upper coil form is assembled;

an upper coil of electrical conductor wrapped around said upper coil form;

a plurality of rod magnets inserted in the holes in said first and second plates of said upper coil form so as to be surrounded by windings of said upper coil;

a lower coil form made of any ferrous or non ferrous, rigid material that can serve as a bobbin around which a coil of wire can be wrapped and having a slot therein;

a lower coil winding of electrical conductor wrapped around said lower coil form;

a ferrous material slug inserted in said slot;

flux transfer plates for concentrating in the vicinity of said upper coil the magnetic flux generated by said one or more magnets in the vicinity of said upper coil and for diverting ambient magnetic flux lines which are fluctuating in accordance with unwanted noise away from said upper coil and into said lower coil;

a printed circuit board for coupling said upper coil to said lower coil such that an output signal is generated which is the difference between an electrical signal generated in said upper coil and a signal generated in said lower coil.

17. A two-coil pickup for a stringed instrument having an upper coil arranged so as to be closest to strings of said stringed instrument and having a lower coil below said upper coil which is coupled so that signals generated in said upper and lower coils are summed but such that any signal generated in said lower coil is 180 degrees out of phase with any signal generated in said upper coil, and characterized by said upper coil having the same or very similar geometry to prior art single coil pickups and a ferrous flux transfer plate which shields said upper coil from magnetic flux variations caused by undesired noise and diverts magnetic field flux variations caused by undesired noise away from said upper coil into the lower coil so as to maximize the amount of noise signal generated in the lower coil and minimize the amount of noise signal picked up by the upper coil.

18. A process carried out in a two-coil pickup for a stringed instrument having an upper coil located near strings of said instrument and a lower coil situated further away from said strings than said upper coil, comprising the steps:

shielding said upper coil from ambient magnetic field fluctuations not caused by vibrations of said strings, and diverting said ambient magnetic field fluctuations so as to be concentrated in the vicinity of said lower coil;

concentrating magnetic field fluctuations caused by vibrations of said strings (string flux) in said upper coil and shielding said lower coil from said string flux; and

subtracting the signal generated in said lower coil from the signal generated in said upper coil.